Teaching Statement
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I have taught courses in many subjects and at a variety of levels, from freshman courses in calculus to graduate courses in combinatorics, probability and ergodic theory. I am comfortable teaching courses in these subjects as well as introductory courses in analysis and algebra or topics courses in areas of special interest to me such as the theory of tilings and the theory of interacting particle systems. I have done extensive work using undergraduates as research assistants, and I would hope to be able to continue this in the future. If there is departmental interest, I would also enjoy training graduate students in the craft of teaching through "micro-teaching" workshops similar to the ones that I initiated at MIT and that have been credited with heightened morale and enhanced performance among graduate student teaching assistants. Lastly, I enjoyed the experience of supervising three Ph.D. dissertations at MIT, and would enjoy supervising more graduate students.

In my teaching, I do everything I can to get students actively involved. Not only is this more stimulating for me, but it also keeps me growing as a teacher: continual feedback throughout the term lets me know which pedagogic strategies work and which ones don't. I learn students' names early in the term, repeatedly encourage them to participate in class and attend office hours, and generally adopt an unpretentious, enthusiastic manner. I also look for opportunities to get the students to teach themselves: I encourage collaboration on homework, and there are few things I enjoy more in the classroom that moderating a debate between factions that have taken different opinions on some problem or paradox. In a similar way, I find it very gratifying when the students in my Random Tilings Research Group get so excited during our two-hour group meetings that they continue to discuss their research during the break, so that when I return to the lab I have to ask them to catch me up on what they've been talking about.

I have also been involved with less formal teaching activities during my time at M.I.T. One example is provided by the undergraduate seminar on number systems that I have taught three times. In the seminar, I give students some background on number systems like quaternions, p-adic numbers, countable ordinals, non-standard reals, surreal numbers, etc., and encourage them to explore their properties through carefully designed problem sets and through in-depth term-papers. Another example is provided by the workshop on "choreographic topology" that I have taught several times during the January term. In the workshop, I introduce students to the topology of knots by having them model the knots with their bodies (holding hands) and then having them collaboratively and kinesthetically solve certain exercises (e.g., figuring out the isotopy between an oriented trefoil knot and its inverse).

I am very thorough and organized in my preparations for classes, incorporating time for both lecturing and for class discussions. I also encourage students to answer each other's questions in class.

In the micro-teaching workshops, I try to get the students to analyze and critique each other's performance as teachers of five-to-ten minute "micro-lessons". There is a certain delicacy to running such a workshop, since I want these novice teachers to get genuine insight into ways they can improve their teaching but I don't want to lower their morale. I try to convey the attitude that when they give a bad lecture

they should view it not as an occasion for self-recrimination but as an opportunity for growth, and that a bad lecture is nothing more than a bundle of missed opportunities, large and small, that should not be missed the next time around. I try to show them, through concrete examples, that pedagogy is as interesting an arena for the exercise of their minds, and as satisfying an outlet for their creativity, as mathematical research. Above all, I try to convey to them a sense that teaching is a skill that, regardless of one's native talent, one can and must cultivate throughout one's career.

I love doing mathematics, and for me this includes talking about mathematics with people at all levels (from elementary school to graduate school), both one-on-one and in the lecture hall. Everything I do in my teaching is motivated by my desire to share the delight I take in mathematics with others.